

525,301

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number
WO 2004/014956 A1

- (51) International Patent Classification⁷: C07K 19/00, A61K 39/09, 39/00, A61P 15/18, 1/04
- (21) International Application Number: PCT/AU2003/001018
- (22) International Filing Date: 12 August 2003 (12.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/402,838 12 August 2002 (12.08.2002) US
- (71) Applicant (for all designated States except US): THE COUNCIL OF THE QUEENSLAND INSTITUTE OF MEDICAL RESEARCH [AU/AU]; 300 Herston Road, Herston, Queensland 4029 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): JACKSON, David [AU/AU]; 74 Woodville Street, North Balwyn, Victoria 3104 (AU). ZENG, Weiguang [AU/AU]; 46 Mercantile Parade, Kensington, Victoria 3031 (AU).
- (74) Agent: F B RICE & CO.; 139-141 Rathdowne Street, Carlton, Victoria 3053 (AU).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL IMMUNOGENIC LIPOPEPTIDES COMPRISING T-HELPER AND B-CELL EPITOPES

(57) Abstract: The present invention provides synthetic immunogenic lipopeptide molecules comprising co-linear T-helper and B cell epitopes, and methods for their production and use in the generation of primary and secondary immune responses, and for the vaccination of animal subjects against particular antigens. More particularly, the present invention provides highly soluble lipopeptides wherein the lipid moiety is attached to the terminal side-chain group of an internal lysine or lysine analog, preferably to the terminal side-chain group of an internal diamino acid residue. Preferably the internal lysine or lysine analog is positioned between the T-helper epitope and the B cell epitope or within the T-helper epitope.

WO 2004/014956 A1